REMARKS/ARGUMENTS

In view of the amendments and remarks herein, favorable reconsideration and allowance of this application are respectfully requested. By this amendment, claims 1, 7, and 12 have been amended. Thus, claims 1-16 are pending for further examination.

Rejections under 35 USC 112, First Paragraph

Claims 1-16 have been rejected under 35 USC 112, first paragraph, as failing to comply with the written description requirement. Applicant first notes that the limitation objected to in the Office Action is inherent in the invention because, for example, it is a custom for users and creators of virtual environments of video games to be separate parties. Thus, users will not know how the creators will have user-controlled characters react when they come into contact with tagged objects in the virtual environment. More explicit support for these limitations can be found, for example, on pages 5-7. Moving from a "generic or canned-animation to a dynamic animation," for example, results in a more lifelike experience for the user because of the spontaneous changes based on unknown tags. Moreover, the techniques disclosed herein "make[] the character's animation *unpredictable*" (emphasis added) and realistic. Still further, the example on pages 5-6 analogize the spontaneity of humans and user-controlled characters reacting to various events. Specifically, by way of example and not limitation, just as a human might be surprised and/or distracted by a loud noise, so too might a user-controlled character. In this example, the user clearly is unaware of the location of the tags in the virtual environment, and the user does not know that his character will be surprised

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(otherwise it would be no surprise at all). For at least these reasons, Applicant

respectfully requests that this rejection be withdrawn.

Rejections under 35 USC 103

Applicant's remarks challenging the rejection of claims 1-16 under 35 USC 103 as

allegedly being obvious over Ventrella in view of Bickmore were deemed unpersuasive.

Without acquiescing to the propriety of the arguments in the Office Action, and without

acquiescing to the propriety of the rejections under 35 USC 103, Applicant has amended

claims 1, 7, and 12 to more patentably distinguish the invention defined by the claims

from the prior art of record. Thus, reconsideration and withdrawal of this rejection is

respectfully requested.

User Knowledge of How User-Controlled Characters will React to Tags
Ventrella seems to suggest having avatars react to certain stimuli in relation to a

set of user-programmed "genes." Users can modify genes when creating their avatars,

and these genes are "analogous to the genes of a human being, in that they determine

characteristics or traits of an avatar that are associate with human being" (col. 3, lines 15-

17). Examples of genes are "alertness, shiftiness, curiosity, and tendency to daydream"

(col. 17, lines 42-44). As an example, when the user specifies a high level of alertness,

the avatar's head will orientation will adjust rapidly to respond to a moving stimulus,

such as a bird (col. 18, lines 13-34). Similarly, "curious" avatars may look at low-

priority stimuli, such as a cat walking by the avatar (col. 19, lines 21-34).

Ventrella seems to suggest at least three ways in which a user can create an avatar.

A user can specify the genes of an avatar, select an avatar archetype and use the

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archetype modified or unmodified, or the user could create a large, statistically diverse population of avatars by using a pseudorandom number generator to automatically assign the individual values for each gene of each avatar. Applicant respectfully submits that in each case, the user knows exactly the type of avatar he is getting and thus, at least to some extent, how the avatars will behave when they come into contact with tagged objects.

In the first case, as shown in step 1901 of Fig. 19, the avatar's reaction is thoroughly predictable because the "daydream timeout value" is set "according to [the] daydreaminess gene," and the user defines, and has the capability to modify, all genes (col. 5, lines 61-64).

In the second case, where users select avatars from among pre-defined, canned archetypes, a user still knows what he is getting and thus, at least in part, how the avatar will react when it comes into contact with tagged objects. The same logic as above applies when users modify archetypes. However, the user still knows what the avatar will be like even though the user does not customize its genes, insofar as this feature is inherent in the definition of "archetype." A user would expect an avatar with the archetype of "basic man" or "basic woman" (the only two examples given in Ventrella) to look and behave accordingly – i.e. have average attributes, physical characteristics, etc.

While a pseudorandom number generator may be used to create a large, statistically diverse population of avatars, Applicant observes that the invention defined by the claims clearly is limited to "a user-controlled character in a virtual three-

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dimensional environment of a dynamic three-dimensional game space." A user never will create and control so many "(thousands or potentially millions) . . . unique avatars" (col. 8, lines 37-46). Accordingly, this technique for creating an avatar largely does not apply to the instant invention.

But even if Ventrella taught using a pseudorandom number generator to create user-controlled avatars, the user still would know what he was getting – namely, an avatar with a pseudorandom set of characteristics that can be adduced over time. A pseudorandom avatar could be thought of as a stranger who has a definite set of attributes that initially are unknown to a user but become known over time. Even if some time were needed to adduce the specific reaction an avatar would have to a certain class of stimuli based on its genes, a user eventually would know what to expect from the avatar.

Unlike the system of Venrella where genes are user-controllable, and frequently user-specified, currently amended claim 1 requires that "the tag is defined at the location such that the user does not know where in the three-dimensional environment of the three-dimensional game space the tag is located and the user does not know how the tag information and the at least one variable associated with the user-controlled character will affect the animation." This requirement differs from Ventrella, where the user specifies genes that govern responses to various stimuli. Thus, with respect to the examples above, the user of a system according to the current claims would not know that a bird contained a tag. Moreover, the user also would not know how the avatar will react. In Ventrella,

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the reaction is based solely on the alertness gene. But here, the reaction is free from any user-controllable pre-defined characteristics.

The invention defined by the claims herein is advantageous because it promotes lifelike, custom responses to tagged objects. It is also advantageous because the user's ignorance of the surrounding tags and the reactions associated thereto promotes the spontaneous actions and reactions of avatars. The spontaneity, in turn, increases the realness of the system while furthering user enjoyment.

Dynamic Animation based on "At Least One Variable Associated with the User-Controlled Character" and Tag Information

Applicant notes that Claim 1 requires that an animation is changed using, inter alia, "at least one variable associated with the user-controlled character, and the tag information." By way of example and without limitation, variables that can be used to adjust an animation are a character's sanity level, health, strength, etc. Applicant respectfully submits that Ventrella does not teach or suggest using an analogous variable to alter an animation. The genes taught by Ventrella are inapposite because they are not variables – i.e., once they are specified, they remain unchanged. There is no teaching or suggestion in Ventrella that an avatar's genes may change as the program progresses. Indeed, such a suggestion would run contrary to the real-world science on which Ventrella is premised. And, as the previous Office Actions concede, because Ventrella does not teach assigning tag information to tags, a fortiori, the animation cannot be modified based on tag information. Thus, Applicant respectfully submits that Ventrella

does not teach or suggest changing a user-controlled character's animation based on "at least one variable associated with the user-controlled character."

The Introduction of Bickmore to Overcome the Deficiencies of Ventrella

Bickmore was introduced because Venrella does not teach or suggest assigning tag information to tags. Even if the combination of Venrella and Bickmore were appropriate, Bickmore does not make up for the deficiencies as set forth above with respect to Ventrella. Thus, Applicant respectfully submits that Venrella in view of Bickmore does not render these claims obvious.

Neither Ventrella nor Bickmore teach or suggest that "the tag is defined at the location such that the user does not know where in the three-dimensional environment of the three-dimensional game space the tag is located and the user does not know how the tag information and the at least one variable associated with the user-controlled character will affect the animation." To refute this point, the Office Action curiously begins by taking Official Notice that "both the concept and the advantages of having said avatars setup by physically different people then [sic] those who are to use said avatars, thus resulting in said user not having a hand in the setup of said avatars, are well known and expect [sic] in the art." The Office Action then reasons that it would have been obvious that:

> "either said end user or said document reader would not be the creators of said
> avatar . . . because it is convention in the art . . . to have, for example, game
> designers or the like create characters for end users to use in a virtual environment
> wherein said users are generally unable to modify the influence of surrounding
> stimuli on said avatars (i.e. said users would not know of the presence of a given
> tag or how the tag will affect the animation) simply because it would conflict with

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the scripting of many conventional games and would render said games non-functional."

Applicant first objects to the Official Notice taken in the Office Action. Clearly, at a minimum, the references cited suggest the opposite conclusion by their very titles alone. Indeed, in Ventrella, "one or more of the genes may be adjusted by a user to allow the user to customize the avatar. . ." (abstract). Bickmore teaches that the user and the document creator can be the same or different people (¶ 11). These explicit teachings run contrary to the Office Action's assertion, and Applicant accordingly objects to the taking of Official Notice.

Applicant next objects to the Office Action's "reasoning" that it is obvious that "users are generally [are] unable to modify the influence of surrounding stimuli on said avatars (i.e. said users would not know of the presence of a given tag or how the tag will affect the animation) simply because it would conflict with the scripting of many conventional games and would render said games non-functional." Applicant submits that the entire point of specifying genes in Ventrella is to modify the influence of surrounding stimuli on said avatars. Ventrella could not be clearer on this point: "the user can indirectly influence these personality traits (and, therefore, the corresponding behaviors) by setting the values of corresponding genes" (col. 17, lines 44-46).

Even setting this argument aside, it does not follow that because users cannot modify stimuli, they will not know of the presence of a tag or how the tag will affect the animation. Bickmore suggests that objects tagged in a document may have specially-colored links to designate that they are annotated with avatar information. Bickmore also

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teaches that whenever an annotated object is selected, the avatar will move from the docked portion of the document (if it is not already active), and it will provide information to the user navigating the page. Accordingly, Applicant respectfully submits that the combination of Ventrella and Bickmore fail to teach or suggest the above-identified claim limitation.

Applicant also submits that the combination of Ventrella and Bickmore does not teach "using . . . at least one variable associated with the user-controlled character . . . to dynamically modify the user-controlled character's animation in real time. . . ." Bickmore, in fact, teaches quite the opposite – all information on how the avatar should react is stored in a avatar script file associated with a tagged object.

For at least the foregoing reasons, Applicant submits that the alleged combination of Ventrella and Bickmore does not render the invention defined by the claims obvious.

The Alleged Combination of Ventrella and Bickmore

Applicant again reiterates that the alleged combination of Ventrella and Bickmore can only be the result of improper hindsight. The differences between the two references are so numerous and significant that one of ordinary skill in the art at the time of the invention would not have been motivated to combine the teachings of Bickmore and Ventrella. *See Graham v. John Deere*, 383 U.S. 1, 148 USPQ 459 (1966). The Office Actions continue to misunderstand Applicant's remarks and arguments, interpreting them as ineffective attacks on the individual references where the rejections have been based on combinations of references. *Cf. In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA

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1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Applicant

submits the following analysis as pertaining to the factual inquiries underlying the

obviousness determination from *Graham*. Those factual inquiries, and the remarks

below, are directed to:

1) Determining the scope and contents of the prior art;

2) Ascertaining the differences between the prior art and the claims in issue;

3) Resolving the level of ordinary skill in the pertinent art; and

4) Evaluating evidence of secondary considerations.

The references must be viewed without the benefit of impermissible hindsight vision

afforded by the claimed invention. *Hodosh v. Block Drug Co., Inc.*, 786 F.2d 1136, 1143

n.5, 229 USPQ 182, 187 n.5 (Fed. Cir. 1986).

First, Ventrella is directed to a player character in a three-dimensional virtual

world, whereas Bickmore is directed to a flat, two-dimensional document. The avatar of

Bickmore exists as attached to a flat, two-dimensional document (i.e. docked at the side

of an HTML document or over an "avatar link"). There is no mistaking that Bickmore

pertains to a two-dimensional avatar. Bickmore explicitly states that "in this discussion,

a two-dimensional avatar is described" (¶ 40). When the avatar is resized it is scaled over

two dimensions (¶ 56). For example, much more computational power is required to

render a three-dimensional world and animate a character, no camera angle issues need to

be resolved in a flat document, a three-dimensional world is much more complex than

mere words on a screen, etc. Thus, Applicant submits that one of ordinary skill in the art

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would not look to a method for conveying pre-recorded information in a static, flat document when trying to build an avatar to exist in, and respond to, a dynamic, three-dimensional virtual world.

Second, given the fundamentally different purposes the avatars in Ventrella and Bickmore serve, one of ordinary skill in the art at the time of the invention (and even today) would find the teachings of Ventrella and Bickmore inapposite based on the comparative levels of spontaneity and the modes of navigation. Specifically, Ventrella teaches having a player character in a virtual world react dynamically based on pre-defined characteristics (genes). Bickmore, on the other hand, teaches having an avatar react in response to a calculated, purposeful action. As suggested in Bickmore, a purposeful action might include a user moving a mouse over certain pre-defined text. Thus, the teachings and suggestions of Bickmore involve calculated movements by the user that are not reconcilable with the purported spontaneity of Ventrella, and, especially, with the dynamic virtual world of the claimed invention.

Moreover, Ventrella teaches navigating through a virtual world via an avatar. Bickmore, however, teaches navigating through a document space using a separate input device. Unlike the avatar in Ventrella that visually represents user input, the avatar in Bickmore only responds to certain pre-defined events (such as a user clicking on a certain link). Thus, the objects of the avatars in Ventrella and Bickmore are fundamentally different – the avatar of Ventrealla is the manifestation of user input that changes according to pre-defined stimuli, while the avatar of Bickmore is merely a means for

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conveying certain pre-defined information allegedly stored in tags in response to a pre-defined user action. Differently stated, *the user in Ventrella moves through a virtual environment by using the avatar, whereas the avatar in Bickmore moves the user through a document*. Thus, because the objects of the respective avatars differ so greatly, Applicant again respectfully submits that one of ordinary skill in the art would not combine the teachings of Ventrella and Bickmore.

Third, Applicant submits that one of ordinary skill in the art would not combine Ventrella and Bickmore because of the very examples contained in Bickmore. Again, Ventrella is directed to a three-dimensional, *virtual environment*. The examples in Bickmore, however, are directed to *static documents* created with HTML. Words, paragraphs, and the like are tagged in Bickmore, whereas cats, forests, birds, and the like are tagged in Ventrella. The environments used and objects tagged are significantly different. Applicant submits that one of ordinary skill in the art at the time of the invention would never look to consider using techniques associated with a webpage when building a game.

The Office Action alleges that motivation to combine comes from Ventrella's suggestion "that stimuli can be prioritized using any reasonable criteria." Applicant notes that Ventrella teaches using a sentience engine to determine how an avatar should respond to a stimulus based, in part, on the genes. The sentience engine of Ventrella seems capable of determining which stimuli have priority. Thus, the prioritized stimuli of Ventrella do not require any further modification, as the sentience engine itself is

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designed to, as the Office Action puts it, "allow for a more realistic interaction vetween said stimuli and an avatar. . . ."

For at least the foregoing reasons, then, Applicant respectfully submits that one of ordinary skill in the art at the time of the invention would not have been motivated to combine the teachings of Ventrella and Bickmore. Such a combination can only be the result of impermissible hindsight.

Conclusion

For at least the above reasons, Applicant believes that the claimed invention is not obvious in view of the cited prior art. Thus, reconsideration and withdrawal of the rejection of claim 1 are respectfully requested.

Applicant also submits that amended independent claims 7 and 12 are not rendered obvious by the cited references for substantially the same reasons set forth above with respect to claim 1. Applicant respectfully submits that the remaining claims (i.e. claims 2-6, 8-11, and 13-16) are allowable at least by virtue of their respective dependence from allowable independent amended claims 1, 7, and 12.

In view of the foregoing remarks, Applicant believes that all of the pending claims clearly and patentably distinguish the prior art of record and are in condition for allowance. Thus, withdrawal of the rejection and passage of this case to issuance at an early date are earnestly solicited.
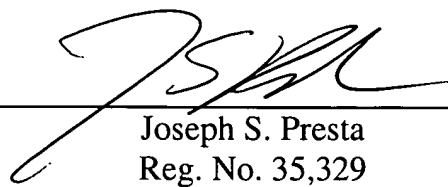
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Should the Examiner have any questions, or deem that any further issues need to be addressed prior to allowance, the Examiner is invited to call the undersigned attorney at the phone number below.

Respectfully submitted,

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